

## REMARKS

Claims 1-3, 5, 7-9, 11-18 and 20-22 were pending in this application. Claims 1, 11-12 and 20 have been amended to correct the issue of too many periods. No new matter has been introduced.

## ARGUMENTS

Regarding the rejections of the claims under Section 102(b) as being anticipated by Heath, the present application as well as Heath describes a composite material. A composite material is a material of two or more connected substances. The properties of these composite materials differ in substance, on the one hand, and, the geometry of the single substances, on the other hand. This can lead to distinct composite materials which differ from each other in fundamental and significant ways. Thus the material of the present application differs considerably from the material disclosed in Heath.

The disclosed materials of Heath describe a so-called laminated composite material. In contrast, the marker according to the presently claimed invention describes a particle composite material, also called a dispersion material. These two materials differ, among other things, in their substantial properties.

Heath describes a radio-opaque material utilizable as an implant. This material possesses a core-shell assembly wherein the core consists of Ta. This core structure can serve as a marker but is at no time in direct contact with body tissue. The marker substance is completely encapsulated by the shell. Therefore, no interaction in view of degradation of the material can occur, which is an essential feature of the radio-opaque marker according to the presently claimed invention. The marker according to the presently claimed invention features a structure wherein the marker component is in principle via dispersion in contact with the tissue.

Furthermore, Heath notes that the shell material of the composite material can consist of NiTi, CuZnAl or CuAuZn. These alloys are not biodegradable. In fact, they are characterized as having an excellent corrosion stability which is essential if toxic elements such as, for example, Ni are used in the alloy. Implants of pure Ni would not normally be used in the human body.

Only an alloy with Ti, especially in the adequate ratio of mixture, makes sure to use these implants. The same is true for the CuZnAl and CuAuZn alloys. That further elements are added to the alloys may be the result of the optimization of the material properties like elasticity or fragility. However, the alloys described in Heath differ basically from the biodegradable base component according to the presently claimed invention.

Therefore, Heath does not anticipate the presently claimed invention.

Regarding the rejection under Section 103 citing, Meyer-Lindenberg et al., Applicant respectfully traverses the rejection.

Meyer-Lindenberg et al. describes an alloy for an implant wherein the alloy is manufactured in the way that it fulfills high mechanical purposes. The disclosure is not targeted to a radio-opaque implant. In view of high mechanical properties of the alloy, the amount of an element like Yttrium or a rare earth, which can also have a potential marker effect, is restricted. However, amounts which lead to an excellent radiopacity, especially for Yttrium or rare earth, are considerably higher. The use of such a high amount of Yttrium or rare earth in the alloys of Meyer-Lindenberg et al. would lead to a rough material. A person skilled in the art would therefore not intend to manufacture an implant with an amount of a radio-opaque element between 10 and 90 weight percent, because from the disclosure of Meyer-Lindenberg et al. this would lead to an implant with low mechanical properties, which is not desired for special application areas. There is no teaching, suggestion or motivation in Meyer-Lindenberg et al. that a thin coating according to the presently claimed invention accords to the implant an excellent ductility paired with high radio-opaque properties.

The subject matter of Claims 11-15 and 20-21 is therefore not obvious in view of Meyer-Lindenberg et al. Accordingly, a combination of Meyer-Lindenberg et al. with U.S. Patent Publication No. 2003/0199993 (Gellman et al.) does not lead to the subject matter of Claim 22.

## CONCLUSION

Applicant submits that the present application is in condition for allowance and respectfully requests such action. If the Examiner has any questions that can be answered by

telephone, please contact the undersigned attorney of record at the telephone number listed below.

It is requested that, if necessary to effect a timely response, this paper be considered a Petition for an Extension of Time sufficient to effect a timely response with the fee for such extensions and shortages in other fees being charged, or any overpayment in fees being credited, to the Account of Barnes & Thornburg LLP, Deposit Account No. **50-4913**.

Respectfully submitted,  
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